

COGNITIVE PLANETARY TRANSITIONS: An Astrobiological Perspective on the “Sapiezoic Eon”.

Perhaps what SETI is searching for is not merely the appearance of a certain kind of civilization on a planet, but a transition in planetary evolution to what we might call the Sapiezoic Eon, in which cognitive processes become integrated into the functioning of a planet.

Will the Anthropocene epoch be an event (like the K-Pg boundary), an interval (like the Paleocene), or something more significant? I propose that what we are actually looking at may not be merely an Epoch boundary, but the advent of Earth’s 5th Eon, which I suggest could be called the “Sapiezoic”. The beginning of a time when cognitive processes become a key part of planetary functioning is potentially as significant as the changes marking the other three Eon boundaries. Each represented a major and permanent shift in the relationship between life and the planet. Now we see the advent of a radically new type of global change: Self-aware cognitive/geological processes. If the “Anthropocene” marks the beginning of the Sapiezoic Eon- then it requires that cognitive processes can become a long-term stable part of a planet, which implies a different behavioral mode than is currently being exhibited by “intelligent” life. From a systems perspective, the early stages of this transition are highly unstable because global influence precedes global control, and thus are characterized by unstable positive feedbacks. However, conscious awareness and control can also be sources of stabilizing negative feedback. Global technological influence contains both perils which threaten to make this a short-lived stage and the possibility that this phenomenon could become a very long-lived and even permanent part of the Earth system. I will discuss the possible observable properties of planets that have gone through a Sapiezoic transition.